Understanding Design Model/View Integration
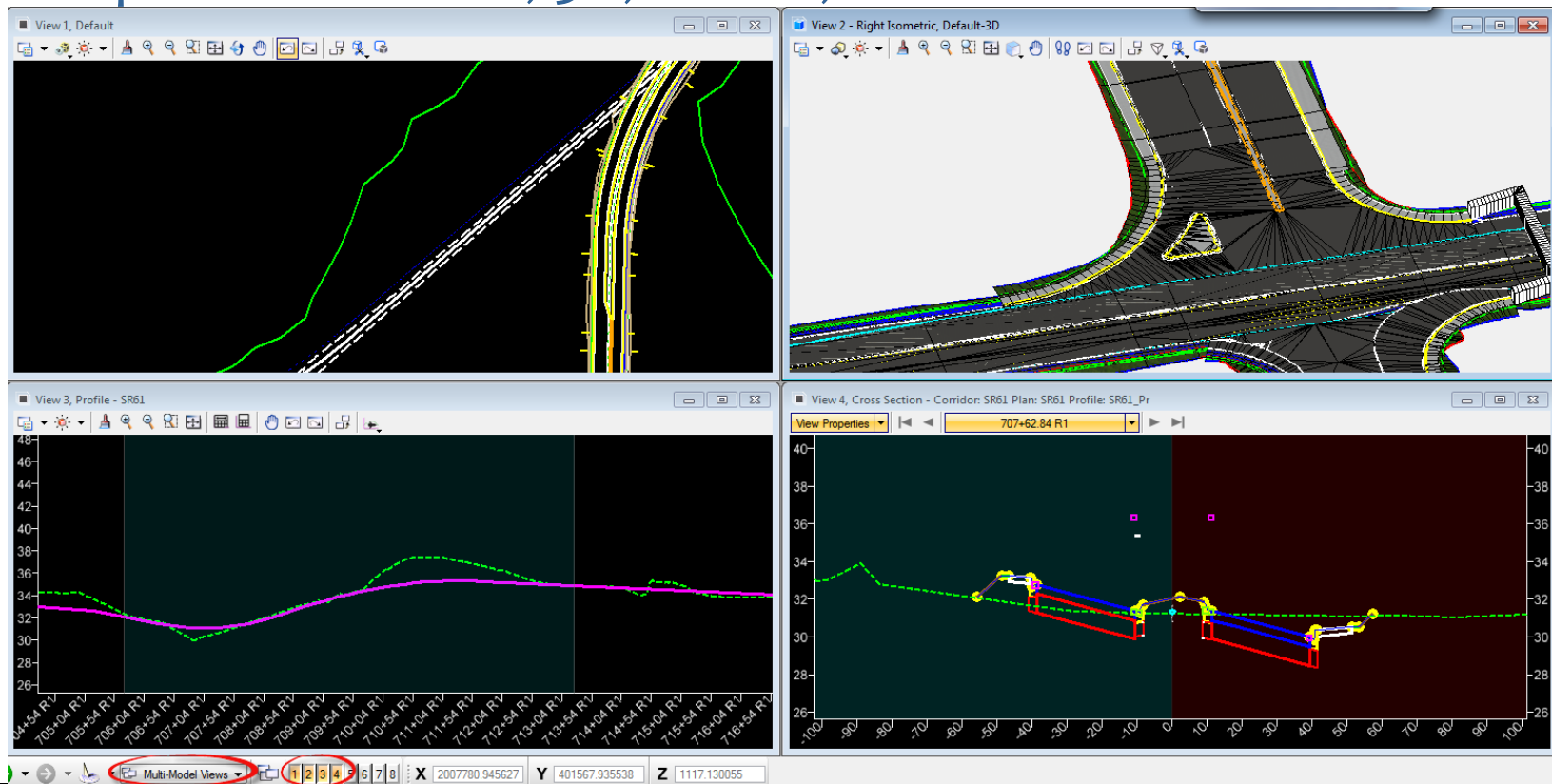
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FDOT Engineering CADD Systems

Description:

In this session we will discuss the viewing integration used in FDOTSS4 OpenRoads Technology. The new Civil Modeling tools work harmoniously once a basic understanding is achieved.

Example VIEWS : Plan, 3D, Profile, Cross Section.

Introducing the 3D design file in DSGNRD

- This is a big hurdle, conceptually!
- Most Civil Designers and Engineers have always used 2D CAD tools for Plan, Profile and Cross Sections
- OpenRoads integrates the three 2D drawing planes to make the 3D model for us!

  FACT is ….
  - You do not have to learn 3D CAD to get started!
  - This is F.E.A.R. (False Evidence Appearing Real)

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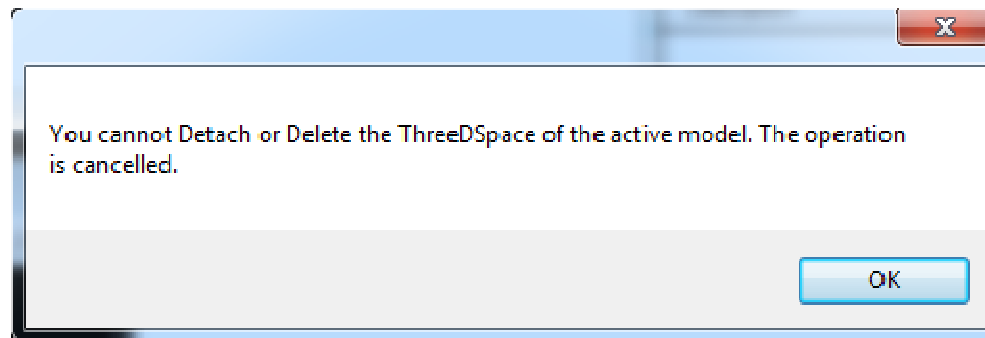 - This is F.E.A.R. (False Evidence Appearing Real)

The Default-3D Model

This model is created in a 2D file when:

- A terrain model is attached as a reference file and set as active.
- A new terrain model is imported from a file
- A new profile is created for an alignment
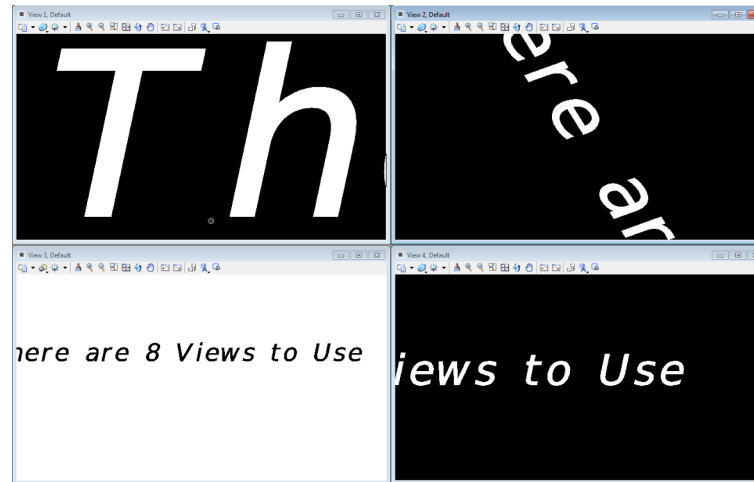- A profile is imported from a gpk file

It is a separate model with separate elements from the 2D file

- Only one Default-3D Model per design file!
- Cannot delete it
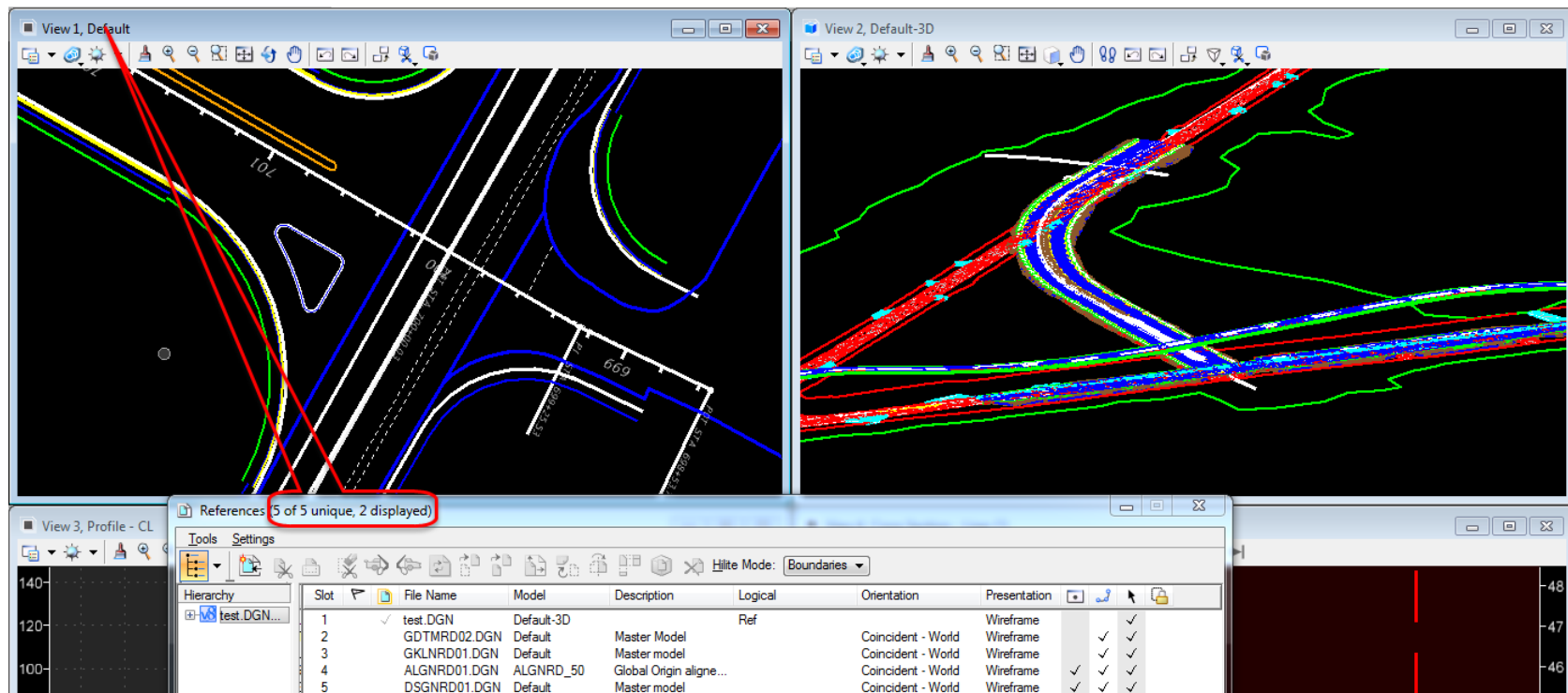- And is should not be detached as reference file

You cannot Detach or Delete the ThreeDSpace of the active model. The operation is cancelled.

OK

Views are dependent and Independent!

- There are 8 views to Use, so … use them!
- Unique View Attributes
  - Level display
  - Model display
  - Reference file display
  - Rotation
  - Display Styles
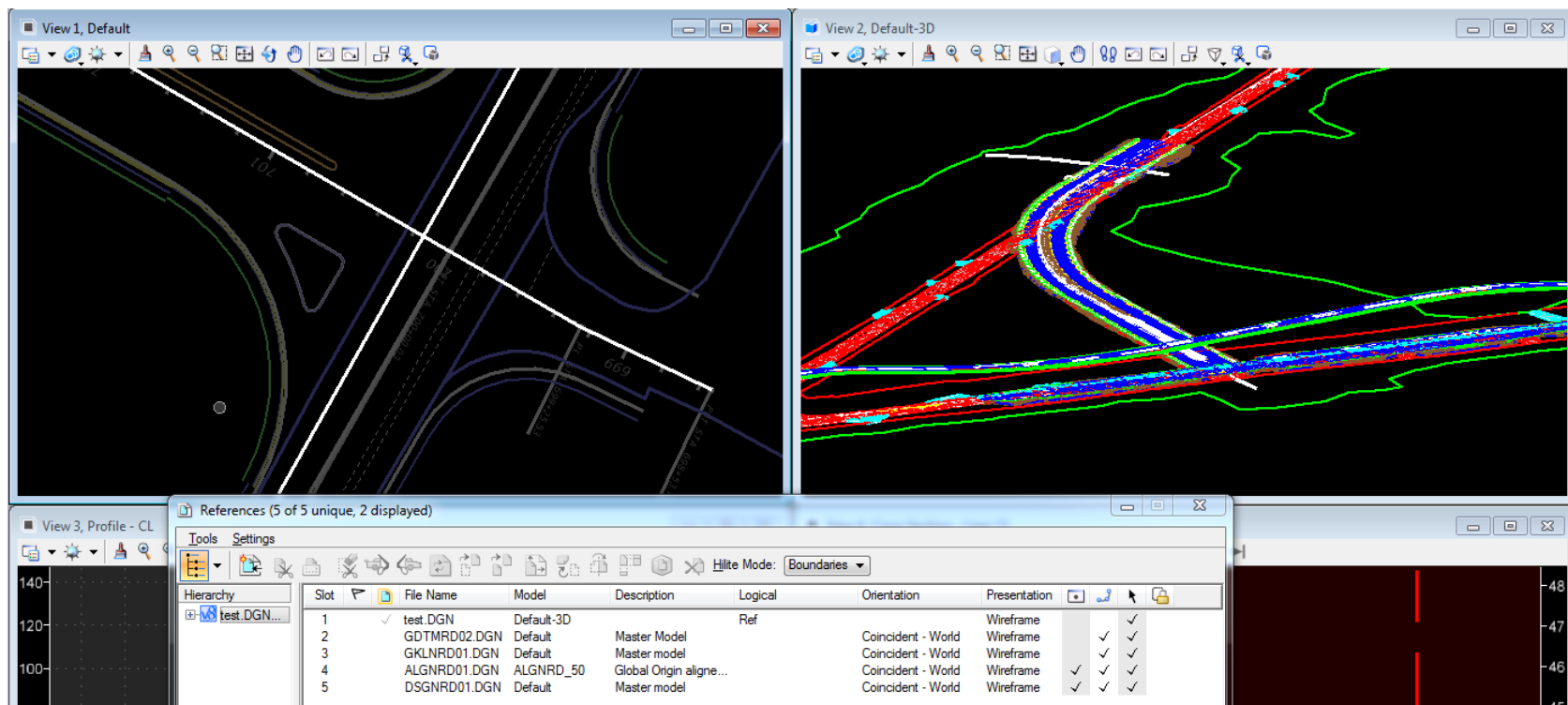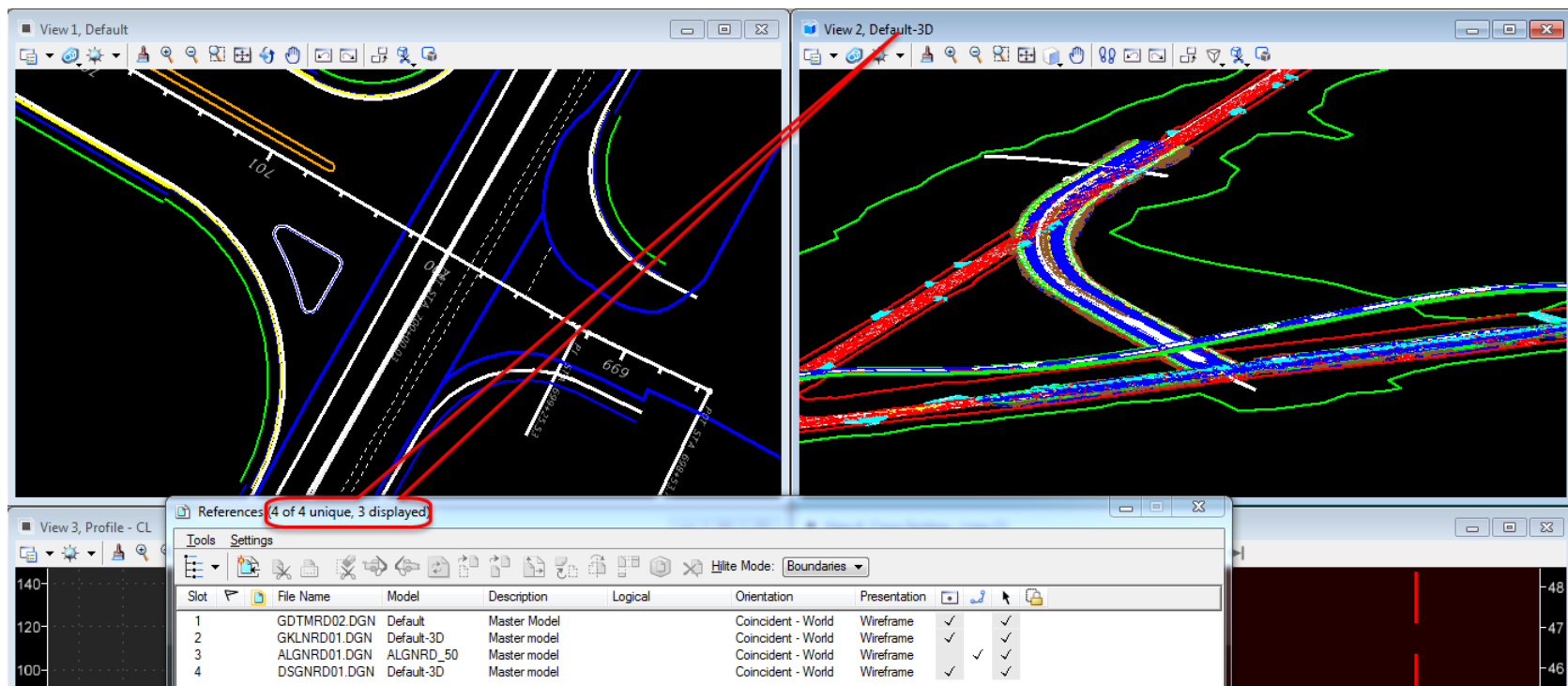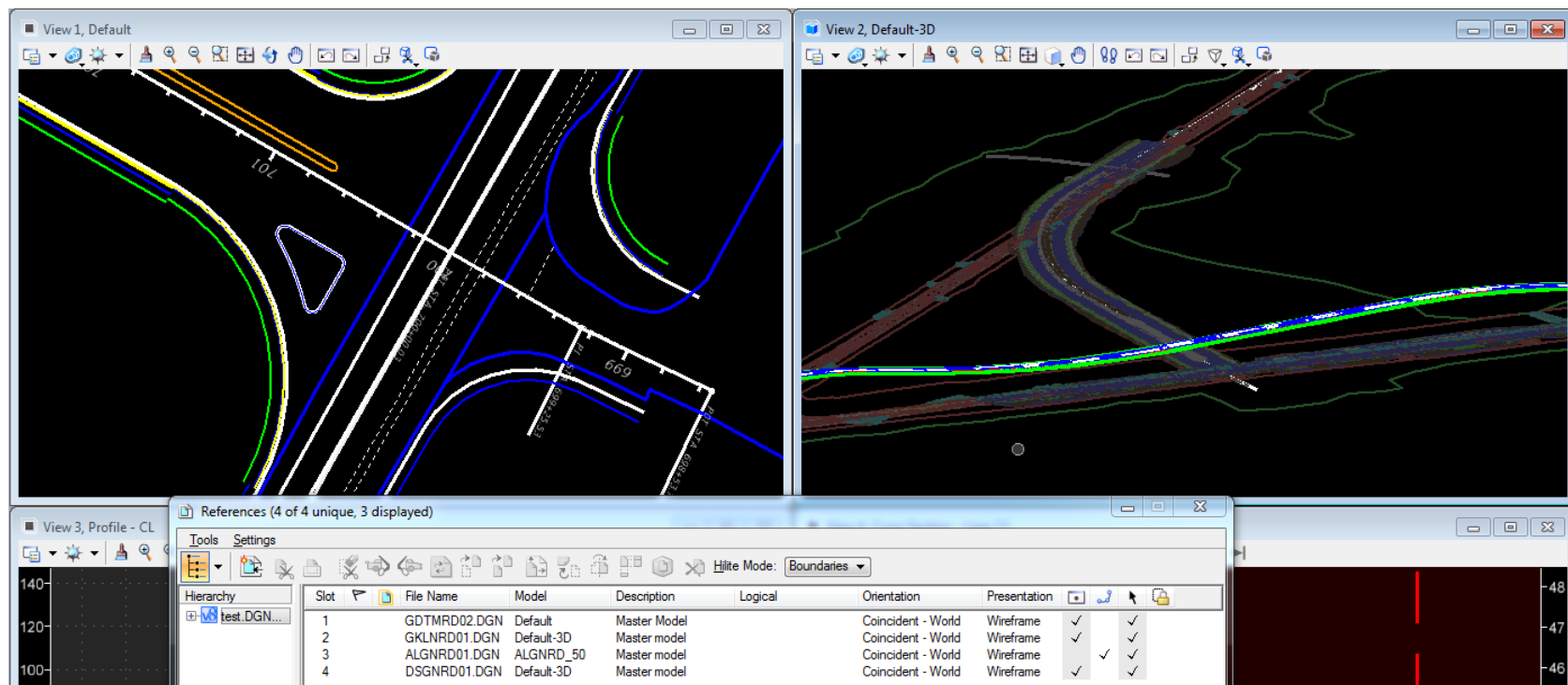 - Zoom level
  - Etc.

Referencing 2D and 3D files

- A 3D model or file can be referenced to a 2D model or file
- A 2D model or file can be referenced to a 3D model or file
- Take care to know what is displayed, F5 will dim References

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OpenRoads "special" Views - Profile

- Open Profile View - Generates a View that presents a desired feature in profile thus enabling the Vertical Geometry tools to interact with the chosen feature.
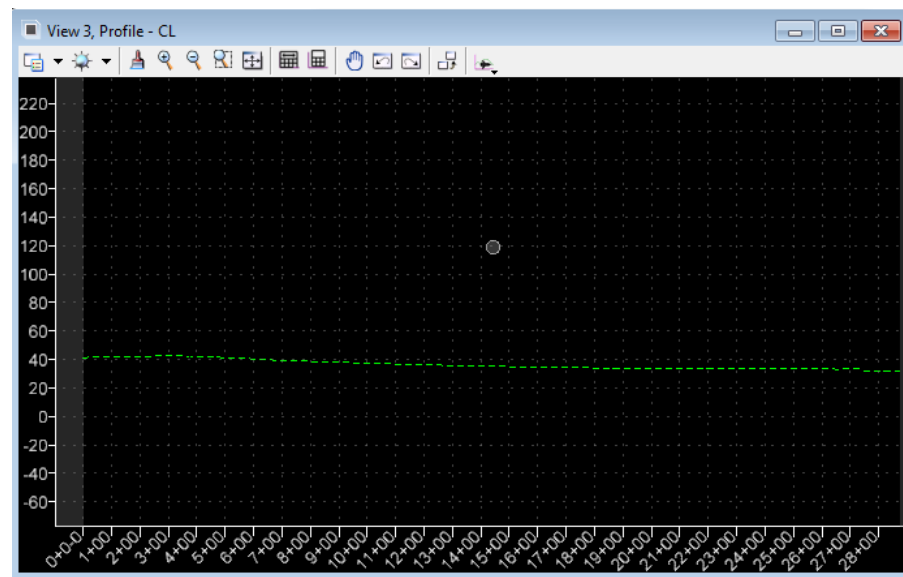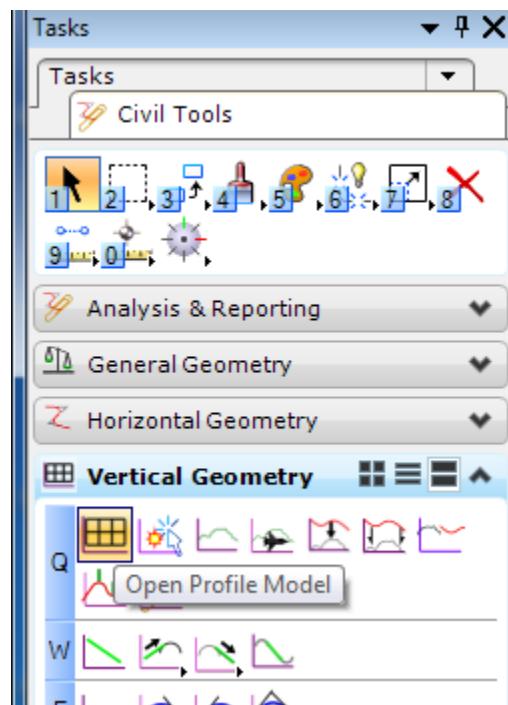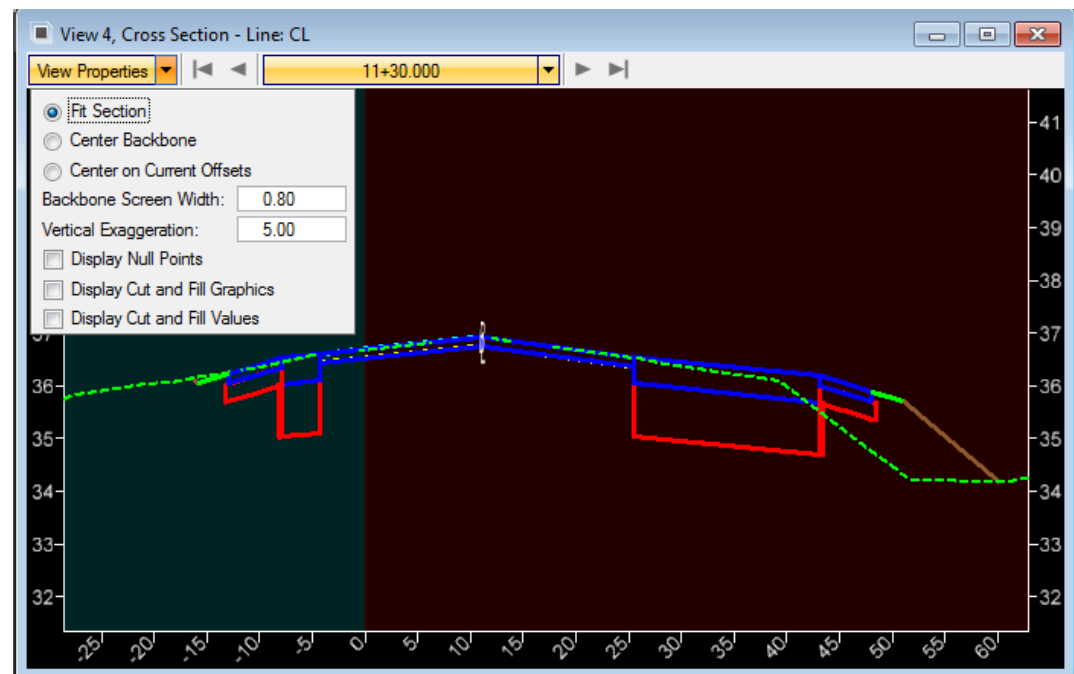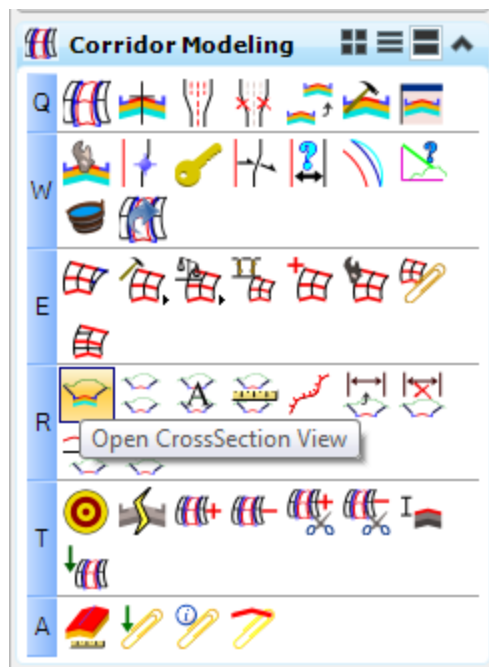
OpenRoads "special" Views - Profile

- Open Profile View – When a line in the profile view is set as active, it creates a 3D line in the Default-3D model.

- The 3D line will change with the active line in the profile view

- Additional 3D lines can be created with other Vertical Geometry tools
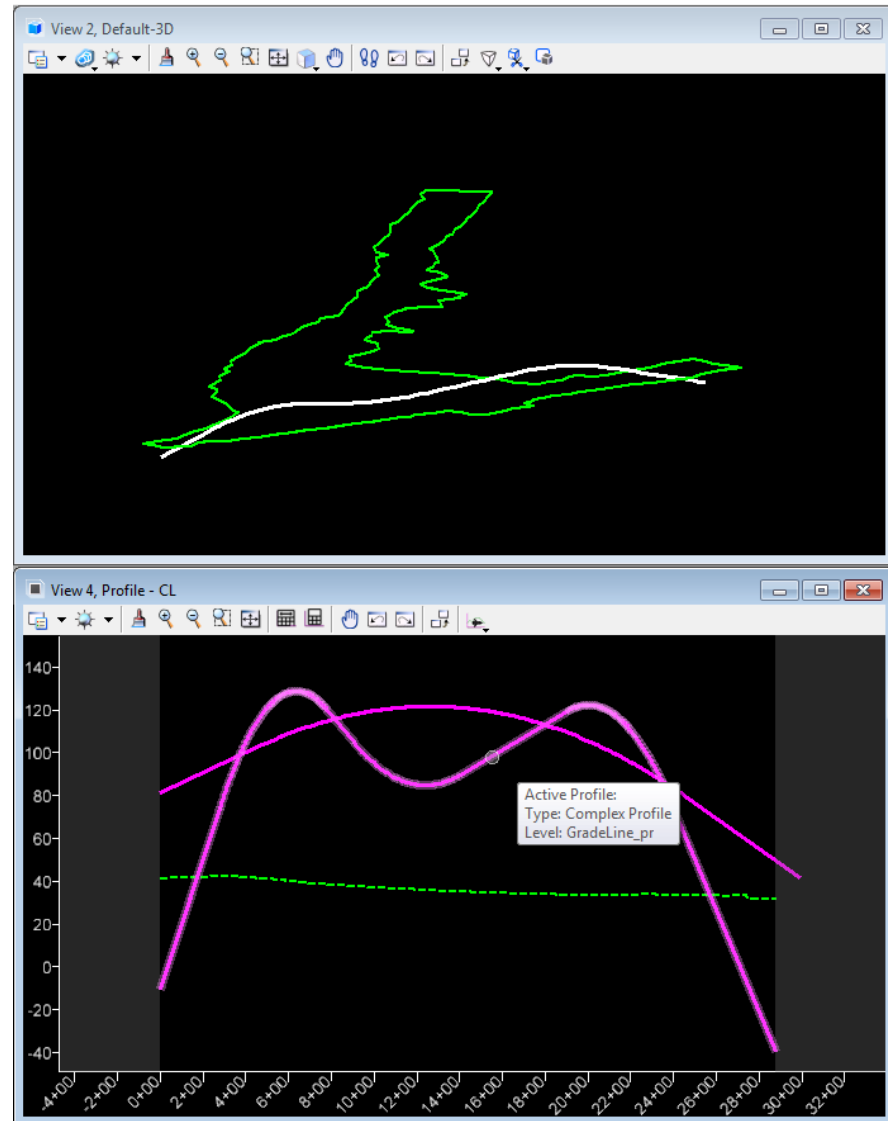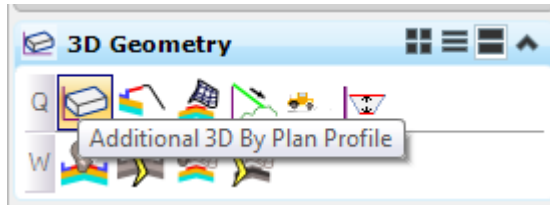
OpenRoads "special" Views – Cross Section

- Open Cross Section View - Using the specified baseline reference to a corridor, or any Civil horizontal geometry, creates a dynamic cross section view in the user-selected MicroStation view.

OpenRoads "special" Views – Cross Section

- Open Cross Section View – shows a slice of the Default-3D model at the specified location including displayed references.
- Yellow Dots are the 3D lines and can be turned off
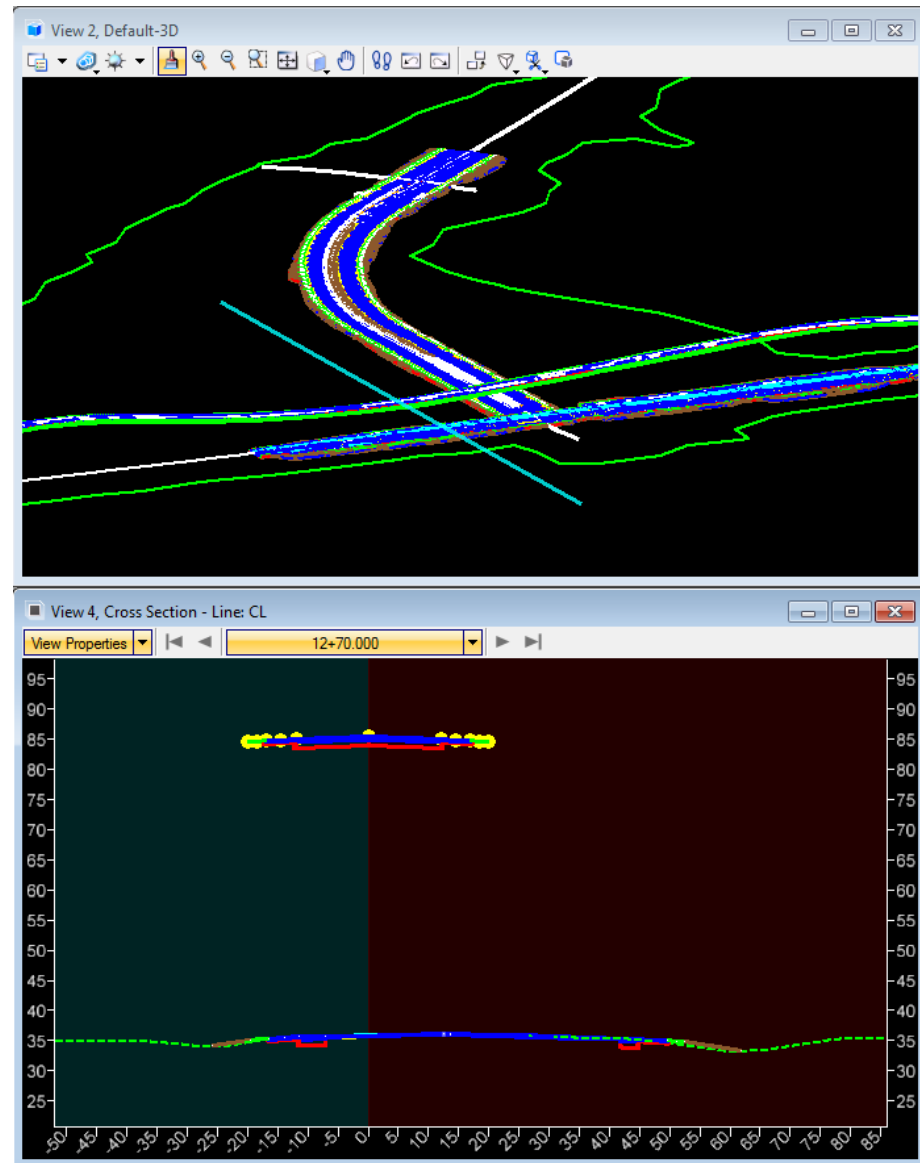
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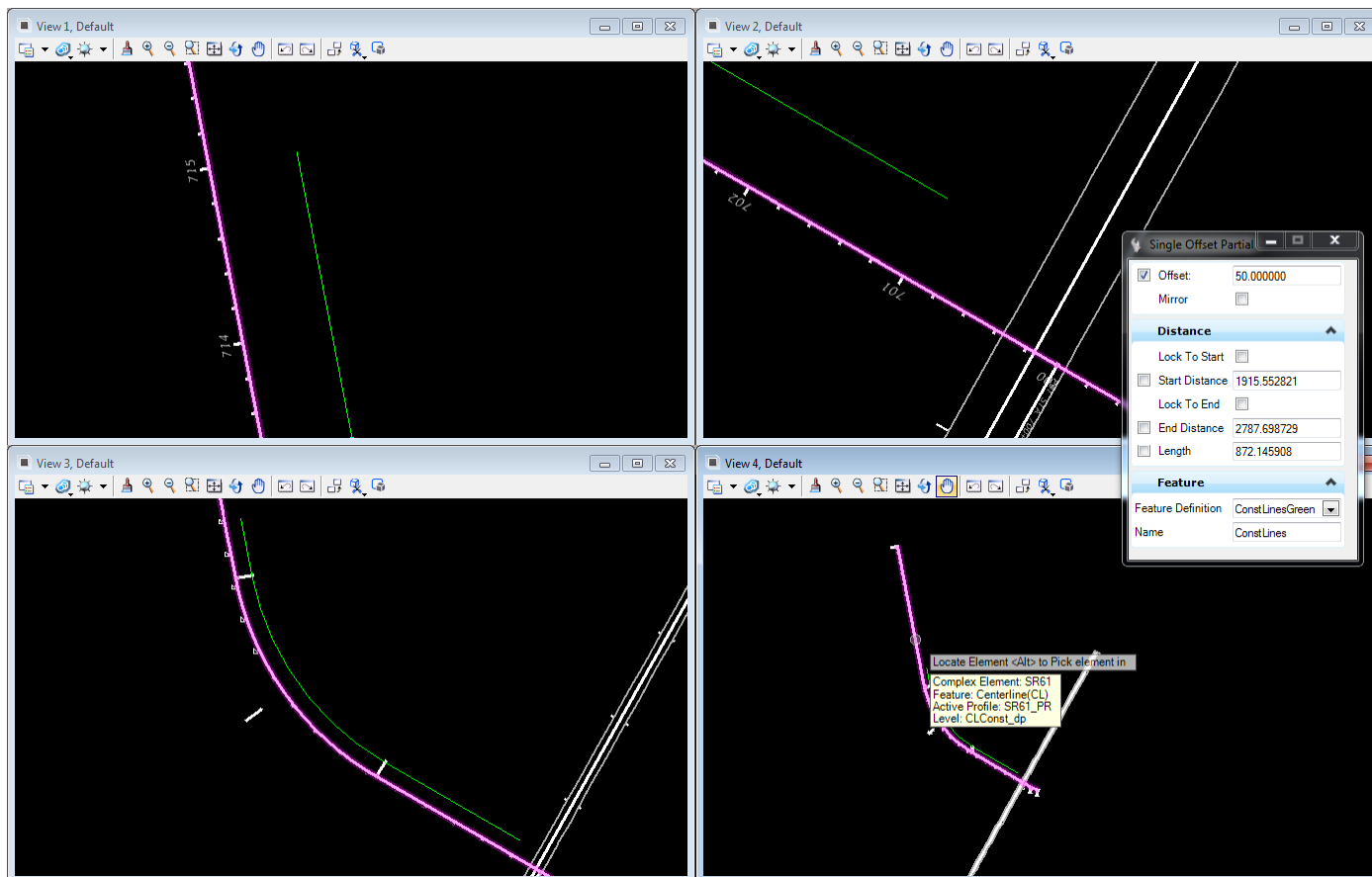- Yellow Dots are the 3D lines and can be turned off

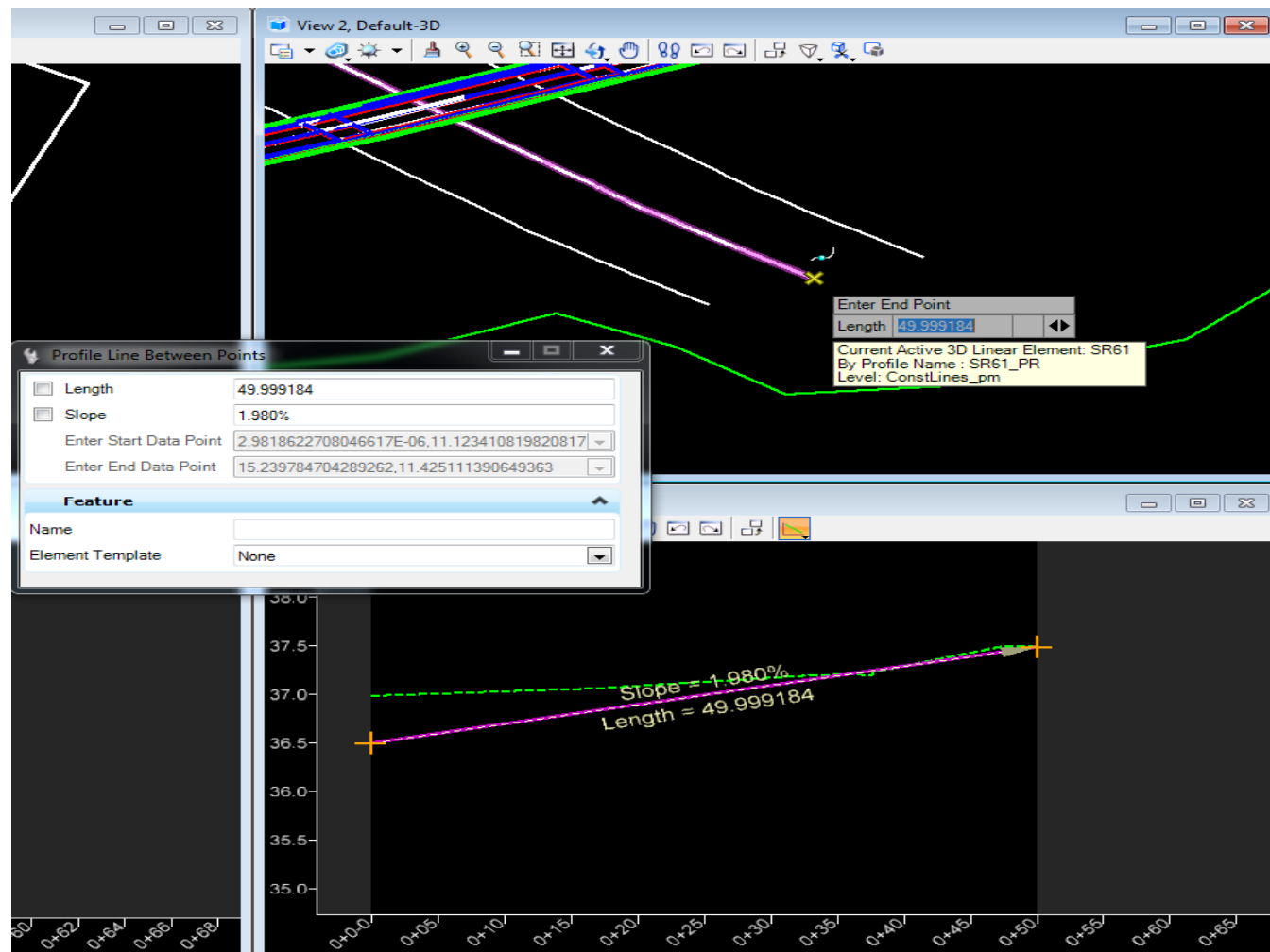- Elevation and offsets can be checked with Civil AccuDraw
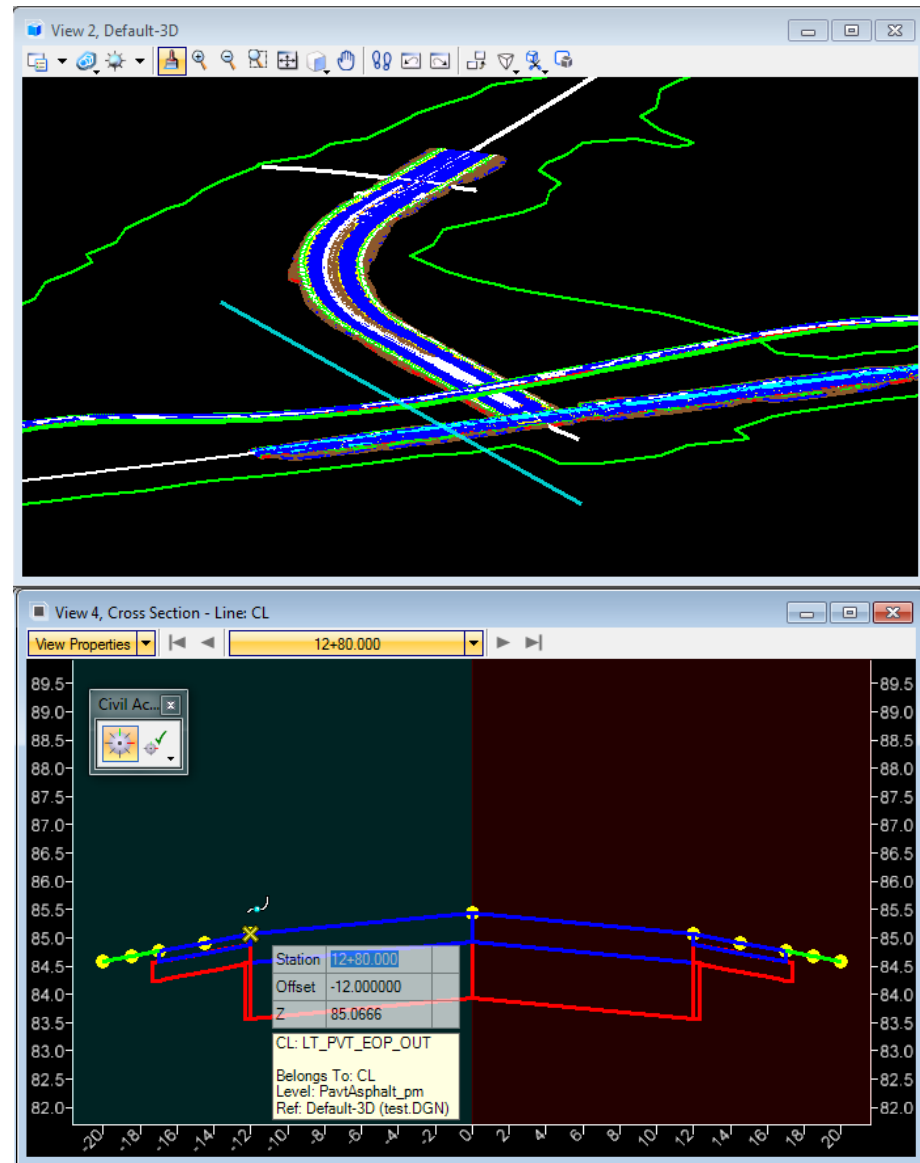
Drawing Between Views

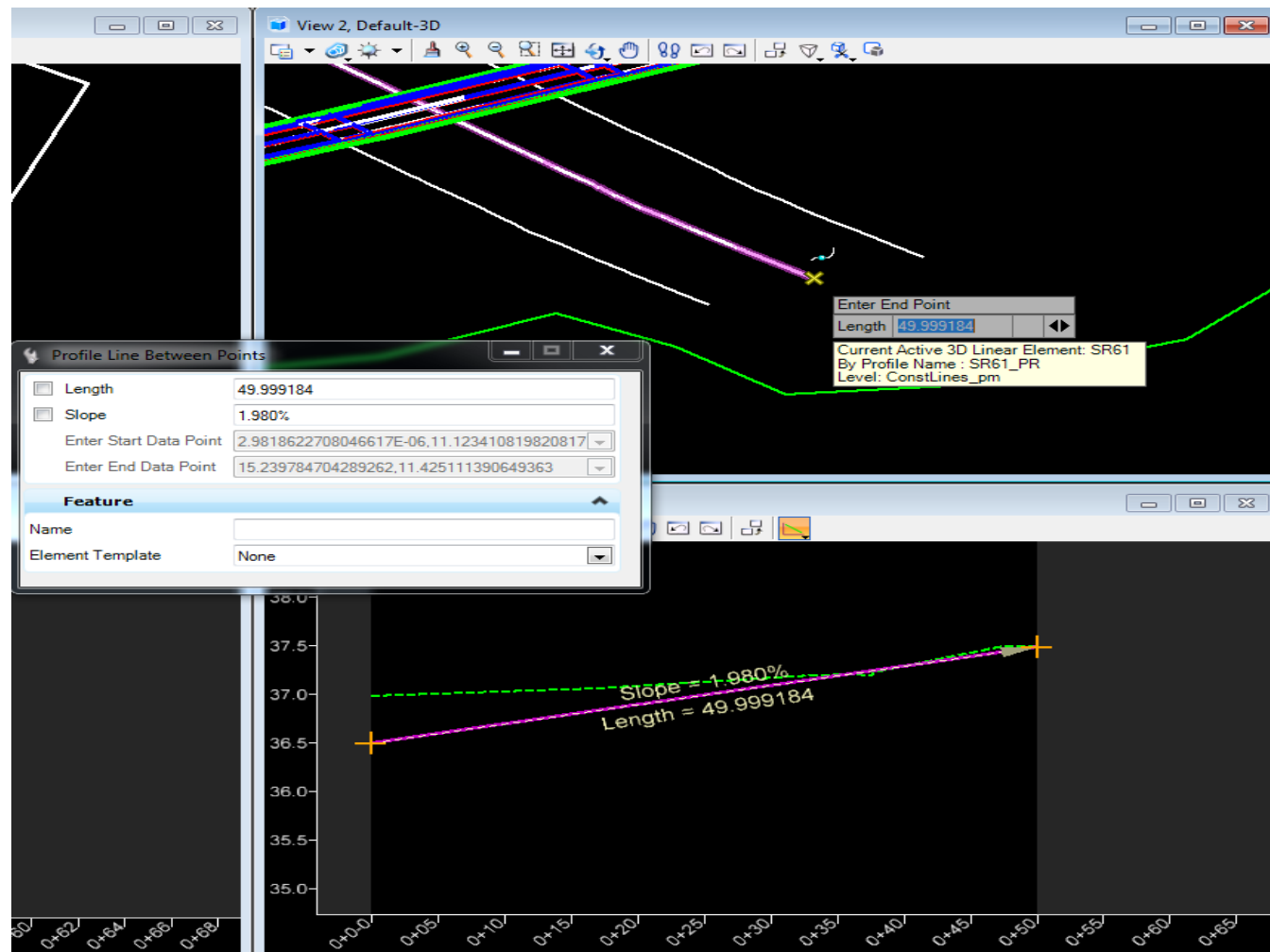- Usually between same 2D plan different views

Drawing Between Views

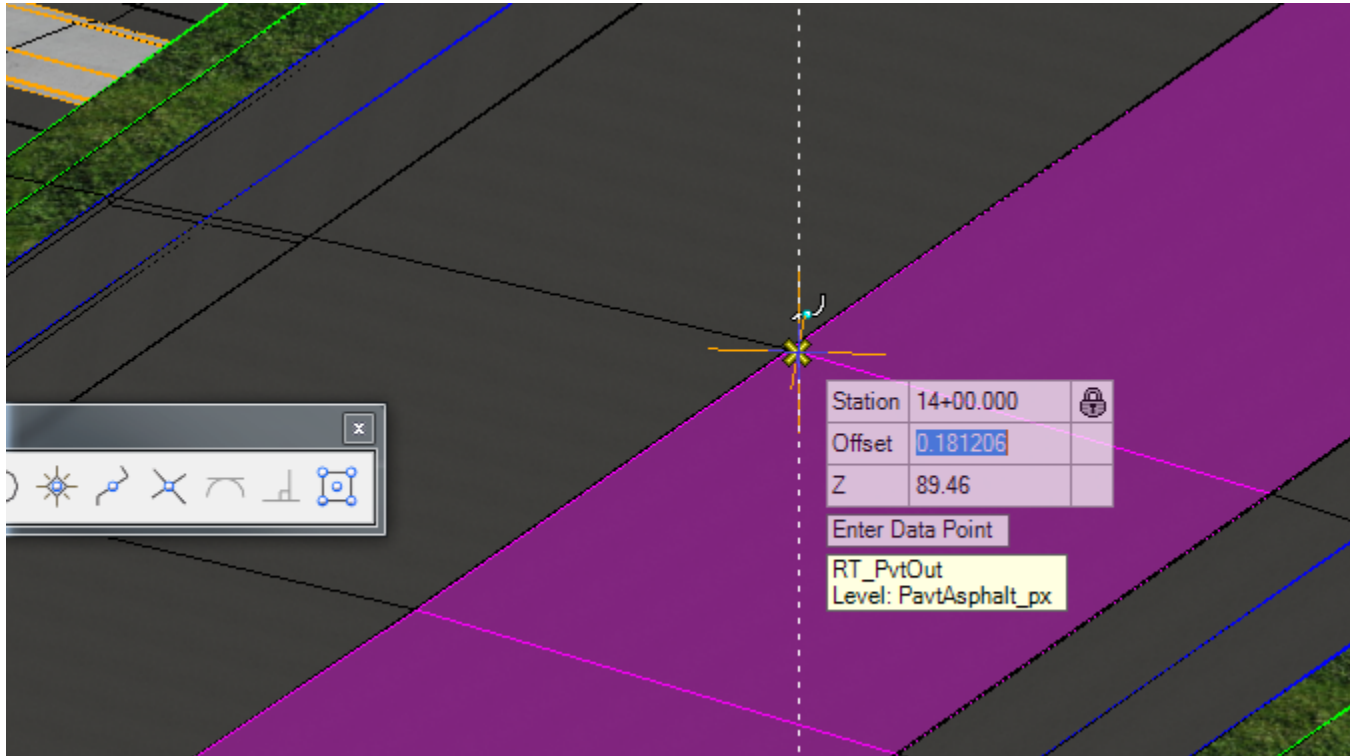- Also between profile and 3D Model views

Vertical Verification Locates on Utilities

- Also between profile and 3D Model views

Civil AccuDraw Between Views

- Also tracks Station Offset and Elevation in 3D Model view

Contact Information

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